POWER-POSITIONING SYSTEMS

Centermount Extending Articulating (CMX) Legrest

Installation, Set-Up & Adjustment User Manual

Motion Concepts

POWER-POSITIONING SYSTEMS

Important!

The most important link in the delivery chain is the end user. The user must be satisfied with the product in terms of function, safety and aesthetics. No sale is complete unless the end user receives thorough training in all aspects of the care and use of the system. A complete instruction session with your customer is essential.

Only the dealer and the health care professional can ensure that the system is set up properly and safely for the specific needs of the individual user.

Training

Installation and set-up of the Centermount Extending/ Articulatiing (CMX) Legrest must only be performed by a trained technician or healthcare professional. If you are not certified as an installer, please arrange immediately for training by a Motion Concepts Technician or Sales Representative. Every effort will be made to meet your training needs.

Note: Before proceeding with the installation/ set-up, please ensure that no pages are missing from this manual.

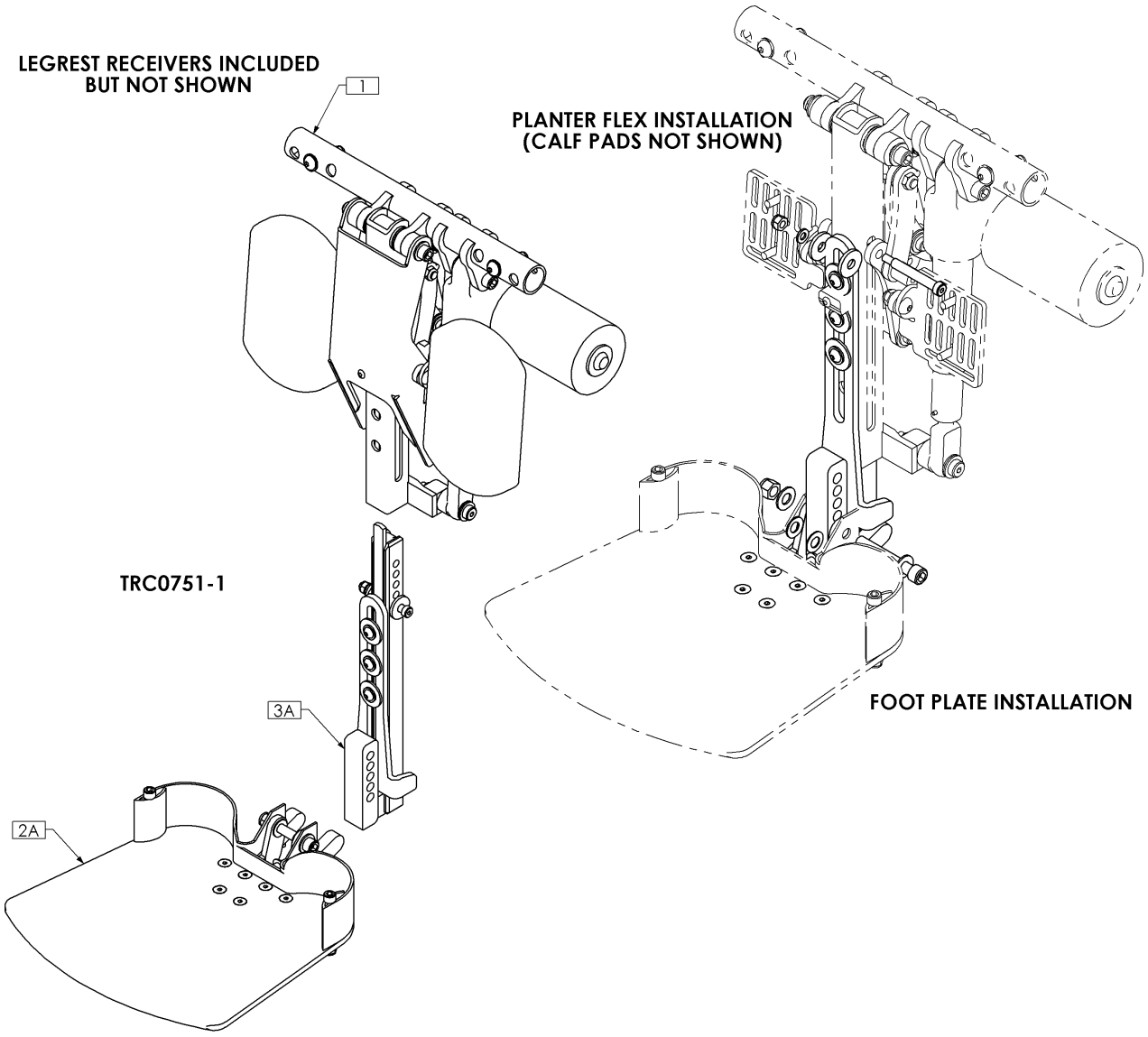
Tools

The following tools are required for the installation/ set-up of the CMX Legrest:

Wrenches: 7/16”, 1/2”
Socket wrenches: 7/16”, 1/2”
Allen keys: 3/16”, 1/4”, 1/8”
Screw Drivers

1.0 - Assembly Overview Drawings

Assembly Overview Drawing



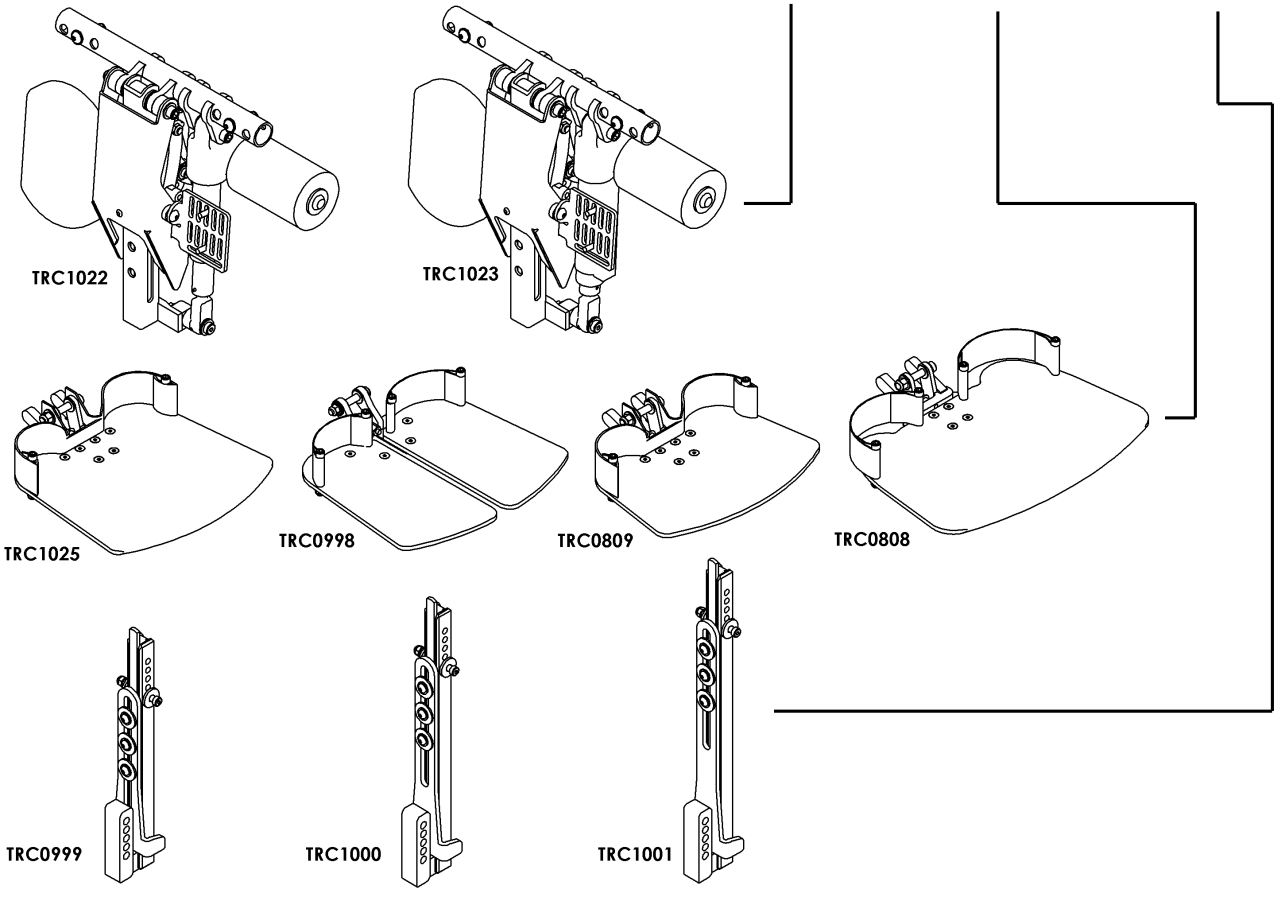
NOTES:
1. N/S = NOT SHOWN

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1A	1	TRC1022	CENTER MOUNT EXTENDED (CMX) ELEVATING/EXTENDING ASS'Y, STD
1B N/S	1	TRC1023	CENTER MOUNT EXTENDED (CMX) ELEVATING/EXTENDING ASS'Y, FEEDBACK
2A	1	TRC1025	FOOT PLATFORM ASS'Y, 12" X 10"
2B N/S	1	TRC0998	FOOT PLATFORM ASS'Y, INDEPENDENT FLIP-UP
2C N/S	1	TRC0809	FOOT PLATFORM ASS'Y, PEDIATRIC
2D N/S	1	TRC0808	FOOT PLATFORM ASS'Y, 15" X 10"
3A	1	TRC0999	PLANTER FLEX ASS'Y, SHORT RANGE
3B N/S	1	TRC1000	PLANTER FLEX ASS'Y, MEDIUM RANGE
3C N/S	1	TRC1001	PLANTER FLEX ASS'Y, LONG RANGE

1.0 - Assembly Overview Drawings

Assembly Overview Drawing

ASS'Y PART NUMBER	CENTER MOUNT FOOT PLATFORM CONFIGURATION	EXTENDING ASS'Y	FOOT PLATFORM ASS'Y	PLANTER FLEX ASS'Y
TRC0751-1 (standard)	12" x 10" Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1022	TRC1025	TRC0999
TRC0751-2 (standard)	12" x 10" Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1022	TRC1025	TRC1000
TRC0751-3 (standard)	12" x 10" Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1022	TRC1025	TRC1001
TRC0751-4 (standard)	Split Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1022	TRC0998	TRC0999
TRC0751-5 (standard)	Split Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1022	TRC0998	TRC1000
TRC0751-6 (standard)	Split Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1022	TRC0998	TRC1001
TRC0751-7 (standard)	Pediatric Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1022	TRC0809	TRC0999
TRC0751-8 (standard)	Pediatric Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1022	TRC0809	TRC1000
TRC0751-9 (standard)	Pediatric Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1022	TRC0809	TRC1001
TRC0751-10 (standard)	15" x 10" Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1022	TRC0808	TRC0999
TRC0751-11 (standard)	15" x 10" Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1022	TRC0808	TRC1000
TRC0751-12 (standard)	15" x 10" Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1022	TRC0808	TRC1001
TRC0751-13 (feedback)	12" x 10" Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1023	TRC1025	TRC0999
TRC0751-14 (feedback)	12" x 10" Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1023	TRC1025	TRC1000
TRC0751-15 (feedback)	12" x 10" Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1023	TRC1025	TRC1001
TRC0751-16 (feedback)	Split Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1023	TRC0998	TRC0999
TRC0751-17 (feedback)	Split Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1023	TRC0998	TRC1000
TRC0751-18 (feedback)	Split Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1023	TRC0998	TRC1001
TRC0751-19 (feedback)	Pediatric Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1023	TRC0809	TRC0999
TRC0751-20 (feedback)	Pediatric Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1023	TRC0809	TRC1000
TRC0751-21 (feedback)	Pediatric Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1023	TRC0809	TRC1001
TRC0751-22 (feedback)	15" x 10" Center Foot Plate Ass'y, 13"-17" Knee-to-Heel	TRC1023	TRC0808	TRC0999
TRC0751-23 (feedback)	15" x 10" Center Foot Plate Ass'y, 15"-19" Knee-to-Heel	TRC1023	TRC0808	TRC1000
TRC0751-24 (feedback)	15" x 10" Center Foot Plate Ass'y, 17"-21" Knee-to-Heel	TRC1023	TRC0808	TRC1001



2.0 - CMX Legrest Design Overview

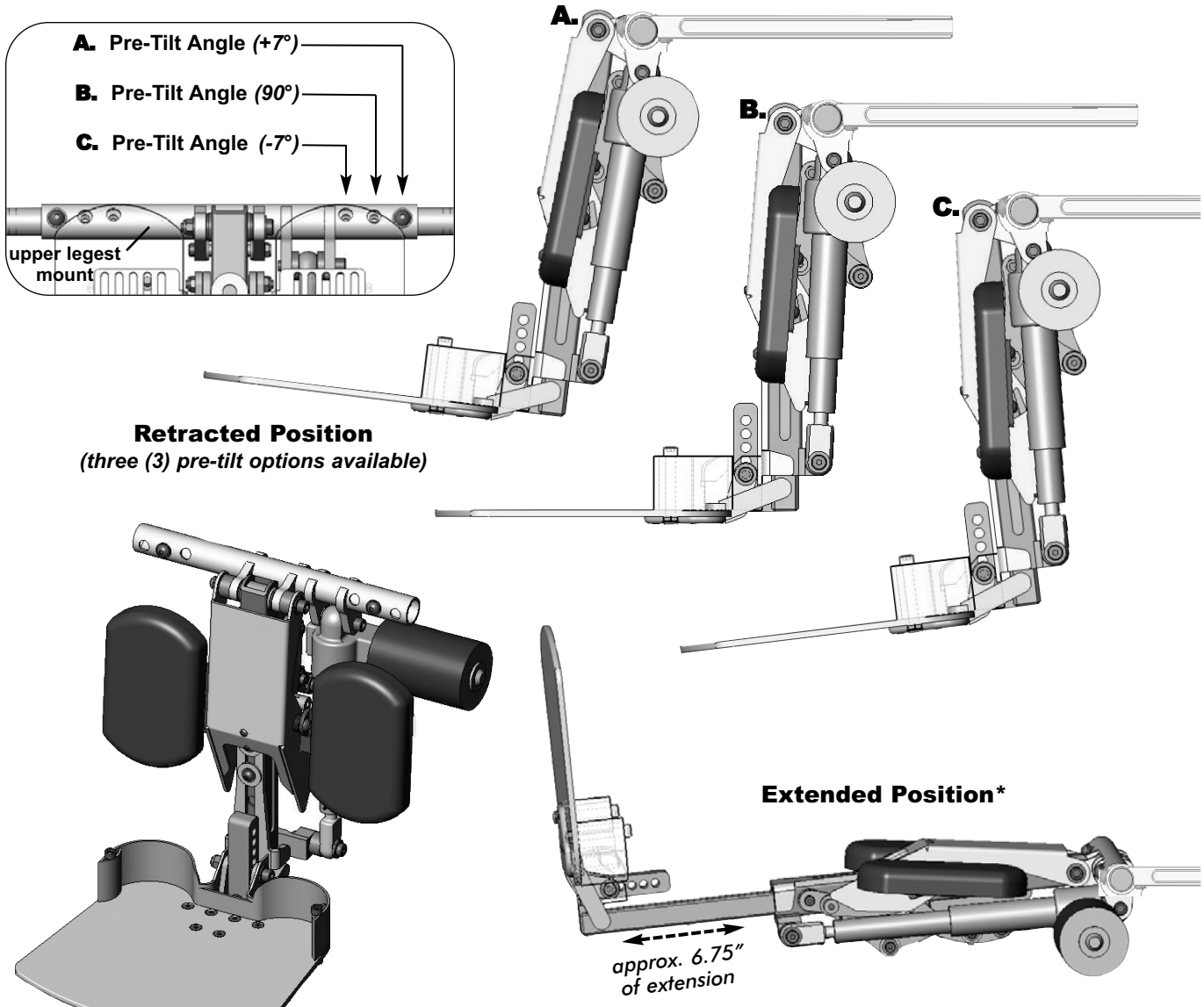
CMX Legrest Design Overview

The CMX Centermount Legrest Assembly is installed onto the seat frame (*not shown*) of the upper seating system via the legrest receivers. The CMX Legrest has been designed with 3 optional pre-tilt positions. By altering the mounting holes used in the upper legrest mount (tube), the pre-tilt angle can be adjusted -*see **Figure 1.0** below*. The CMX Legrest may be configured with either a centermount footplate *(per **Figure 1.0**)*, or individual (split) footplates *(**Figure 2.0**)*, and is available in three different knee-to-heel sizes (13″-17″, 15″-19″ or 17″-21″).

The centermount foot platform option offers dynamic plantarflexion and provides up to a maximum 6.75″ of extension. The split footplates provide the same range of extension, with independent angle adjustment and the footplates may be installed either at the same height (uni-level), or they may be offset from each other (bi-level installation). ***Please Note:** dynamic plantarflexion is **not** available with the split footplate option.*

The following sections will provide greater detail on CMX Legrest installation, assembly and set-up.

Figure 1.0 **CMX Legrest w/ Centermount Foot Platform**

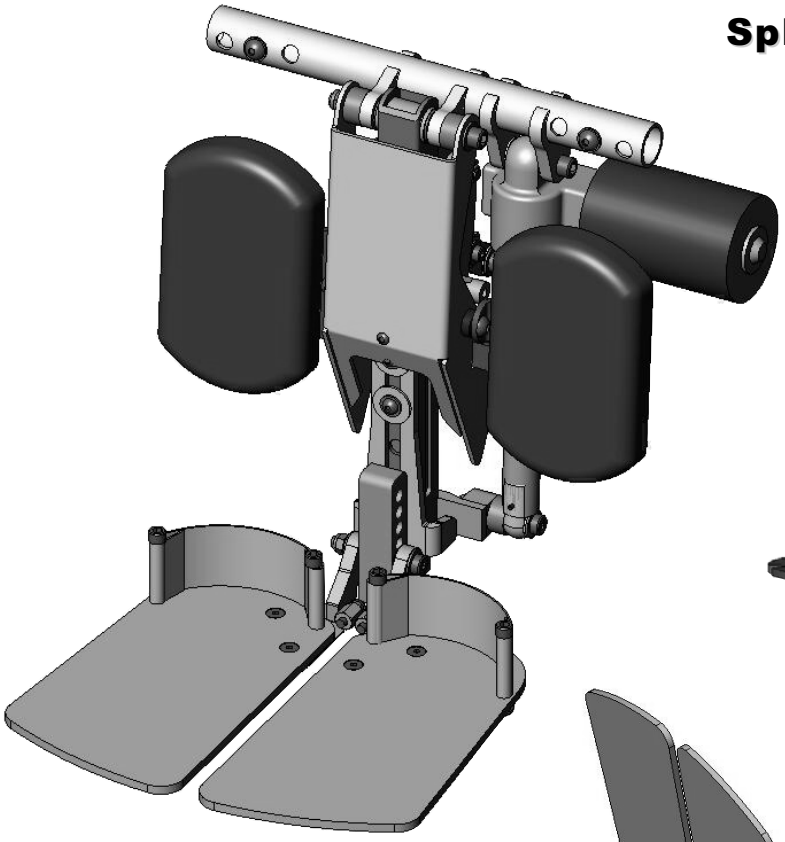


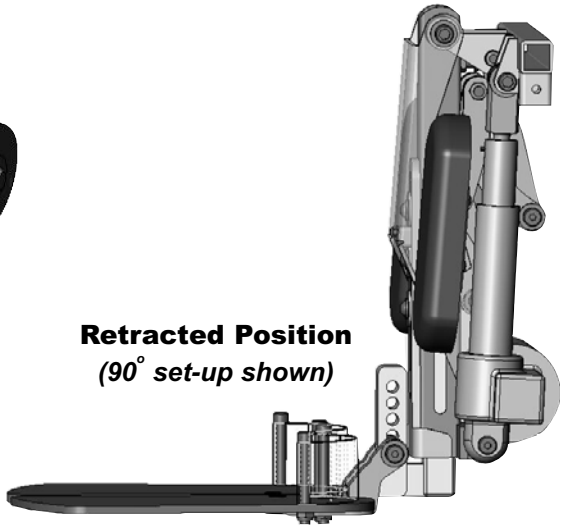
(***note:** The angle at extension depends on initial pre-tilt angle)*

2.0 - CMX Legrest Design Overview

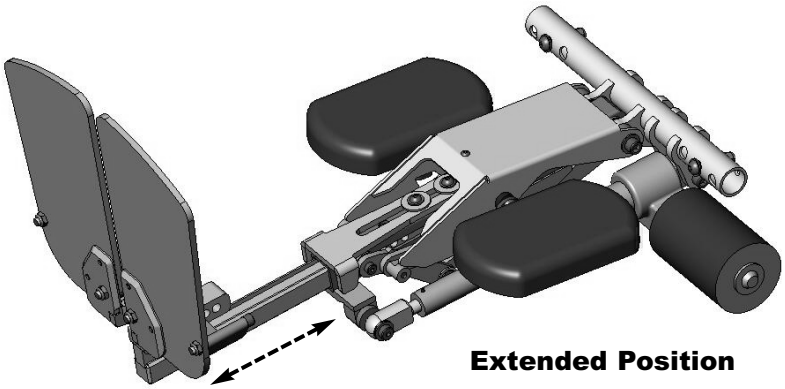
Figure 2.0

CMX Legrest w/ Split Footplate Assembly



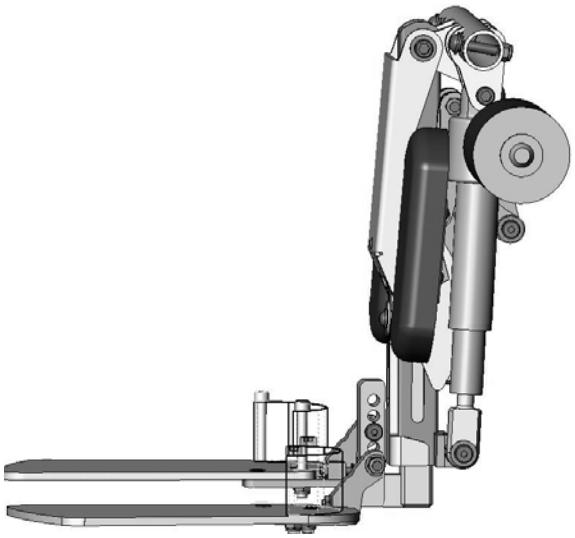


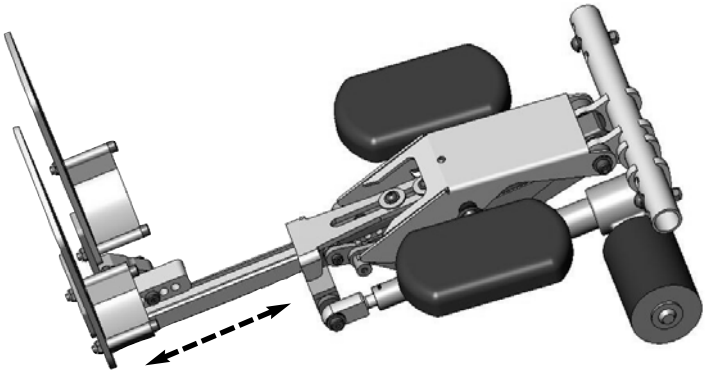
Retracted Position
(90° set-up shown)



Extended Position
approx. 6.75" of extension

Split Footplate Ass'y
(w/ Bi-Level / Offset Footplates)





3.0 - CMX Legrest Set-Up and Adjustment

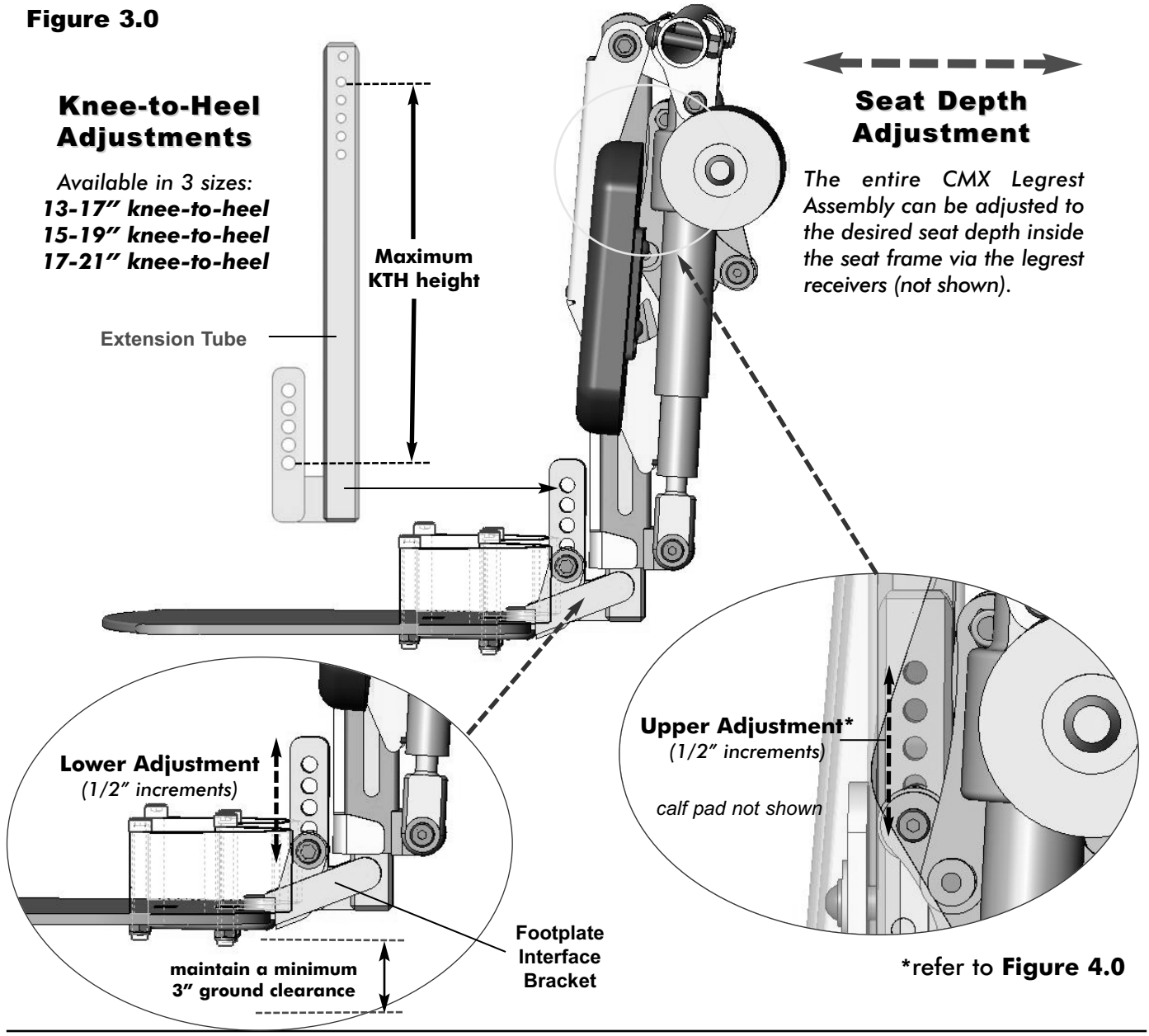
CMX Legrest Set-Up/ Adjustment

A) <u>Legrest Depth Adjustment:</u> Depth adjustment for the CMX Legrest assembly is controlled via the mounting position of the legrest receivers (left & right). The legrest receivers (x2) are installed into the upper seat frame *(not shown)* and can be adjusted in and out to achieve the desired depth.

B) <u>Knee-to-Heel Adjustments:</u> KTH adjustments are controlled via the legrest extension tube. The extension tube is available in to different sizes (*13″-17″ KTH and 15″-19″ KTH)* in order to achieve the desired knee-to-heel length. Heights are determined by the mounting location of the upper link, and by the mounting location of the footplate mounting bracket on the lower extension tube. *(all extension tube adjustments are provided in 1/2″ increments).* Refer to **Figure 3.0** and **Figure 4.0**.

Important! When setting the Knee-to-Heel (KTH) height, ensure the final set-up provides sufficient ground clearance when the CMX legrest is in the down/ fully retracted position. A **minimum of 3″ ground clearance is recommended**.

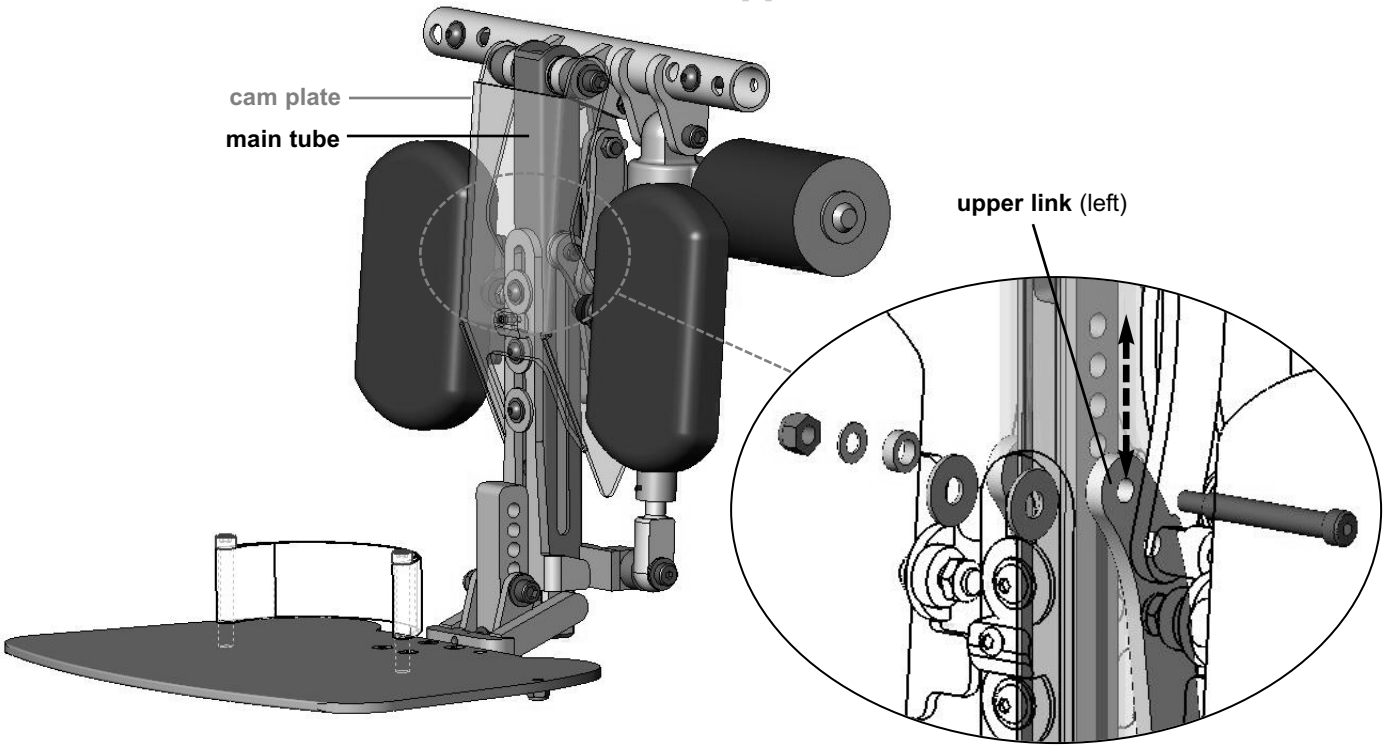
Figure 3.0

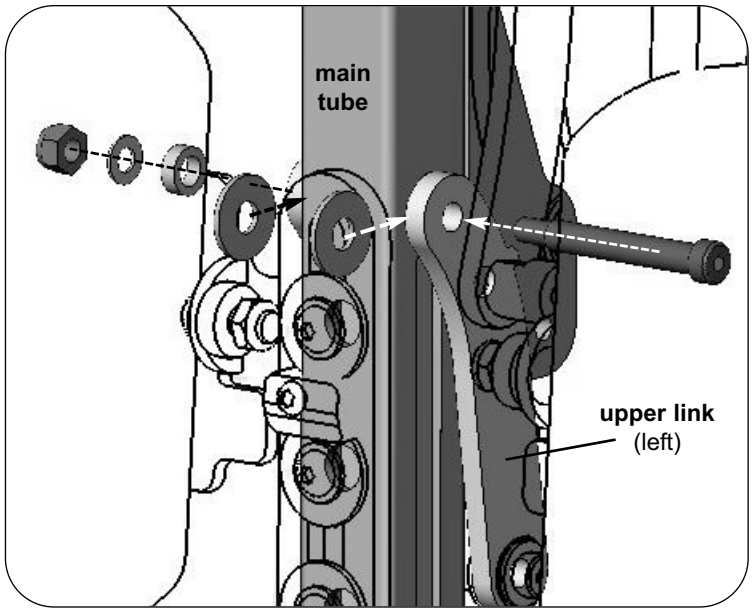

Knee-to-Heel Adjustments
Available in 3 sizes:
13-17″ knee-to-heel
15-19″ knee-to-heel
17-21″ knee-to-heel
Maximum KTH height
Extension Tube
Seat Depth Adjustment
The entire CMX Legrest Assembly can be adjusted to the desired seat depth inside the seat frame via the legrest receivers (not shown).
Lower Adjustment
(1/2″ increments)
Upper Adjustment*
(1/2″ increments)
calf pad not shown
Footplate Interface Bracket
maintain a minimum 3″ ground clearance
*refer to Figure 4.0

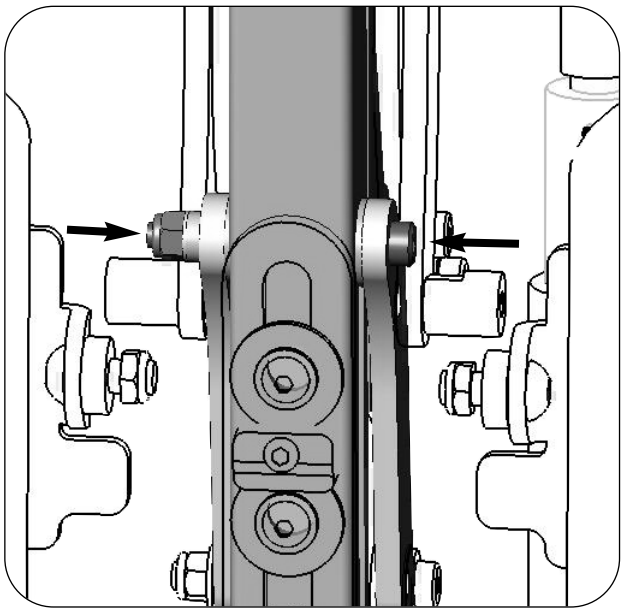
3.0 - CMX Legrest Set-Up and Adjustment

C) <u>Upper Extension Tube Installation/ Adjustment:</u> The upper extension tube may be adjusted in 1/2″ increments to achieve the desired knee-to-heel height *(the maximum KTH height and range is determined by the size of extension tube selected).* To install: The desired mounting hole in the upper extension tube is aligned with the slots in the main tube and secured to the upper links (left & right) of the CMX legrest assembly. (Refer to illustrations in **Figure 4.0** below).

Figure 4.0 **Upper Extension Tube Installation**







Cam Plate (Cover) not shown

3.0 - CMX Legrest Set-Up and Adjustment

D) Lower Extension Tube Adjustment:

Centermount Platform & Split Footplate Installation

The lower extension tube is utilized in combination with the upper extension tube to set or adjust the final knee-to-heel height. Adjustments are available in 1/2″ increments. The final KTH height is dictated by the mounting location of the centermount foot plaform or split footplates.

Installation:

Determine the desired mounting hole on the lower extension tube and align it with the footplate mounting bracket(s). Secure the mounting bracket(s) using the hardware provided*. Refer to **Figure 5A, 5B** and **5C** that follow, for an illustration of the various footplate installations available for the CMX Legrest).

***Note**: Mounting hardware will vary depending on the type and configuration of the footplate(s) being installed*.

Important Reminder! Prior to footplate installation, ensure there is sufficient clearance between the ground and the extension tube when the CMX legrest is in the down/ fully retracted position. A **minimum 3″ of ground clearance is recommended**.

Figure 5A

Centermount Foot Platform Installation

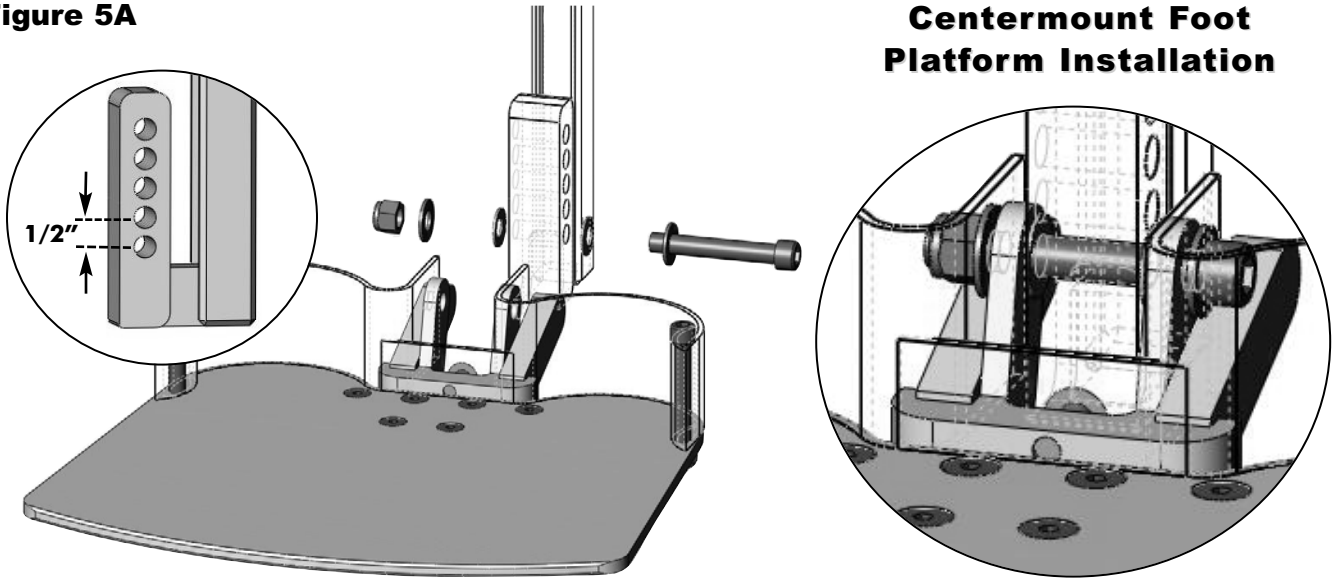
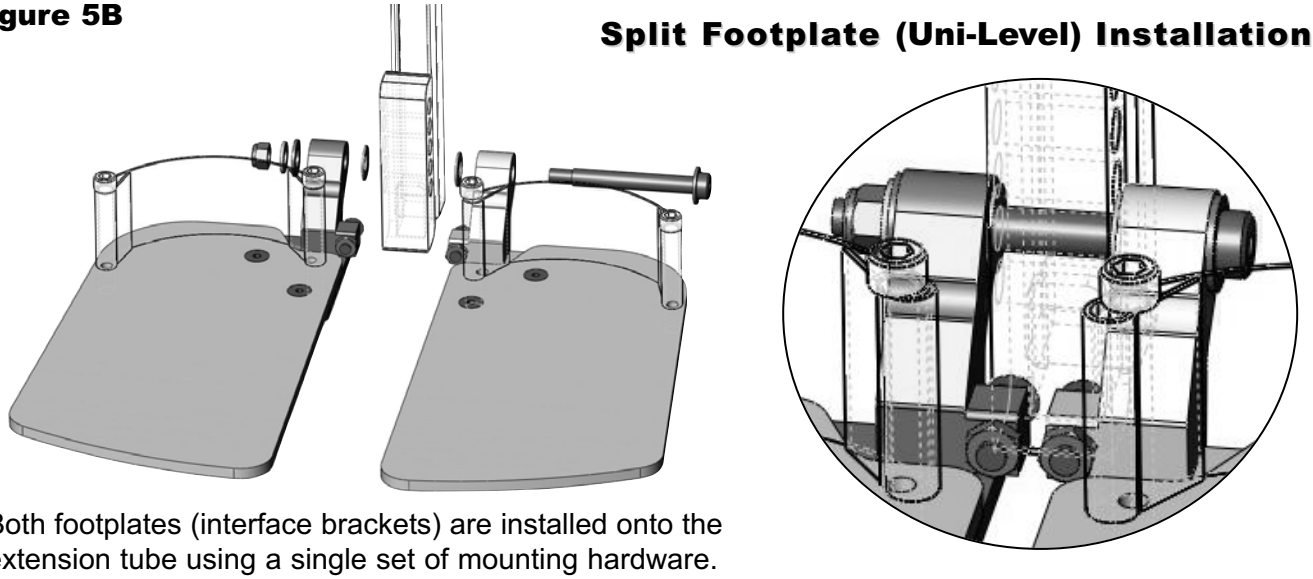


Figure 5B

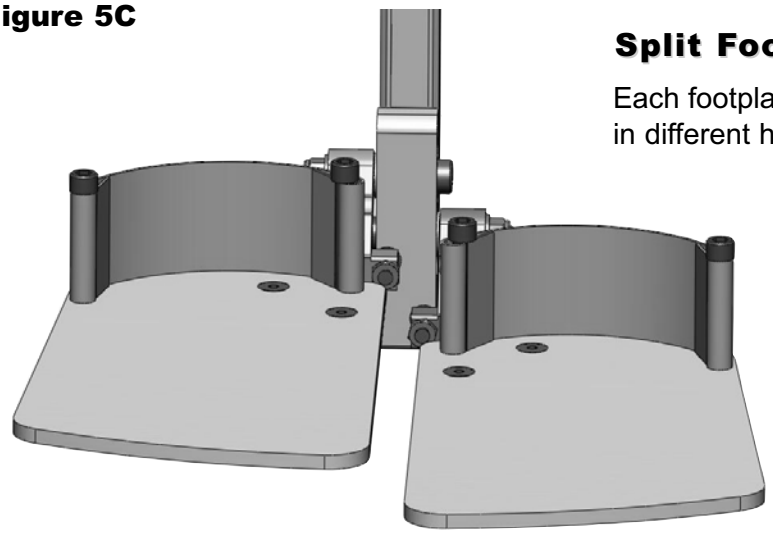
Split Footplate (Uni-Level) Installation



Both footplates (interface brackets) are installed onto the extension tube using a single set of mounting hardware.

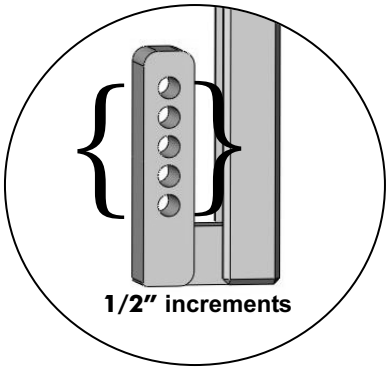
3.0 - CMX Legrest Set-Up and Adjustment

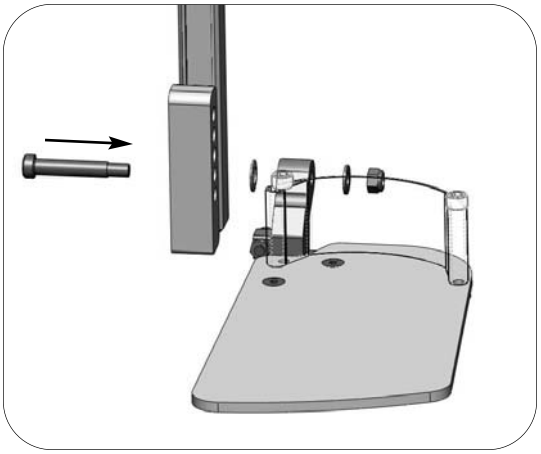
Figure 5C

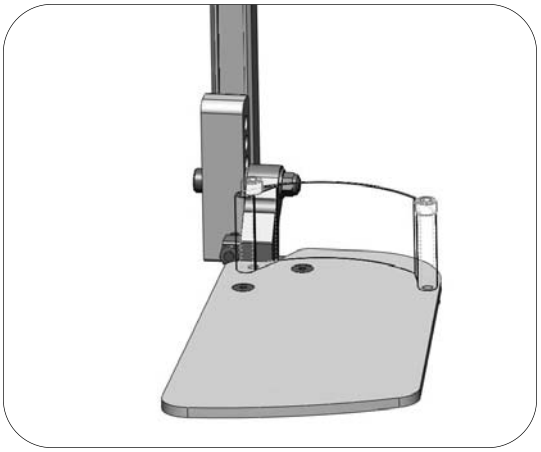


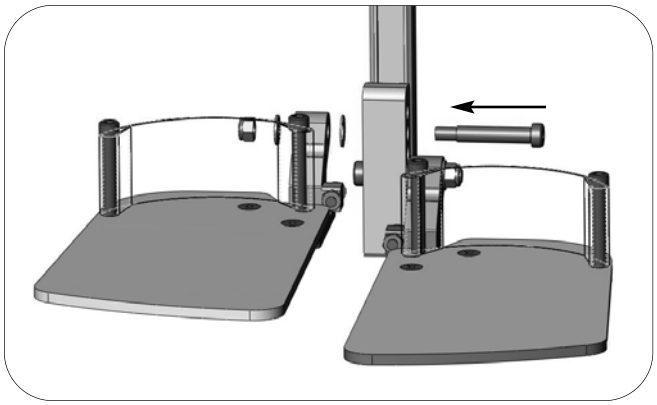
Split Footplate (Bi-Level) Installation

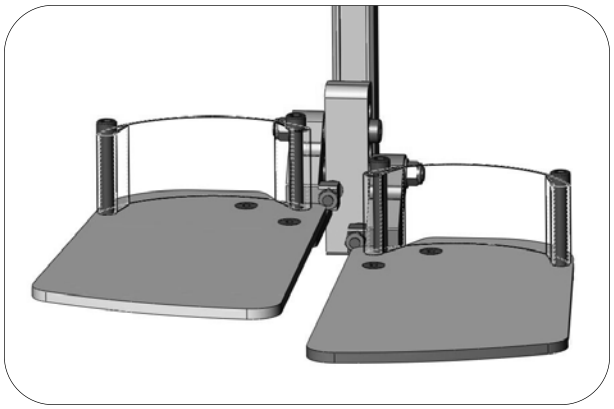
Each footplate is installed using it's own set of hardware in different hole locations on the extension tube.











NOTE: Once installed, the initial footplate angle and plantarflex angle *(centermount platform only)* can then be adjusted. Please refer to **Sections E** and **F**, *(p.12-13)* for detailed instructions.

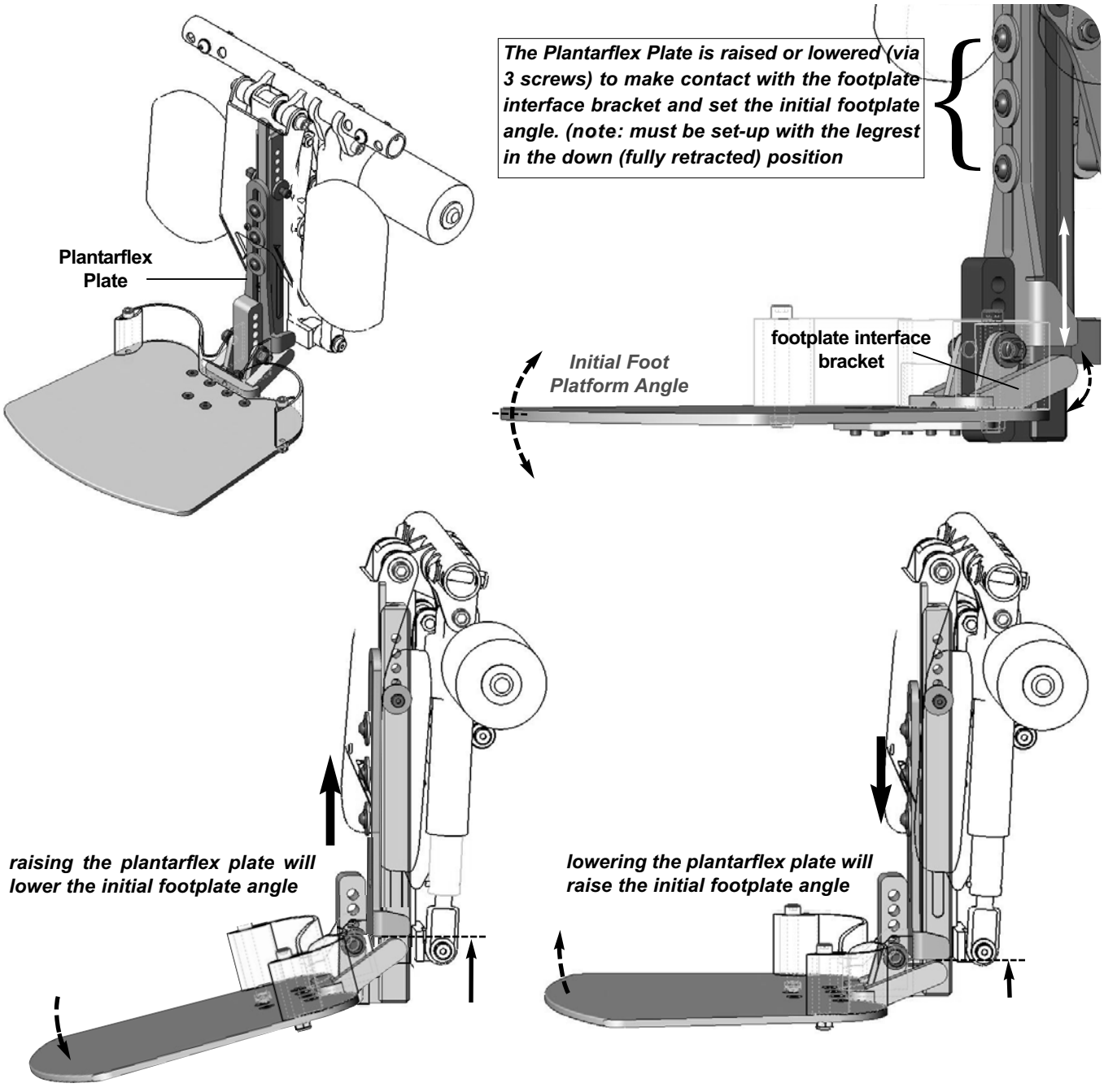
3.0 - CMX Legrest Set-Up and Adjustment

E) CENTERMOUNT PLATFORM- Initial Angle Adjustment & Dynamic Plantarflexion:

The CMX with centermount foot platform is designed to allow adjustment for the initial foot platform angle (when placed in the down/ fully retracted position). The initial centermount platform angle is adjusted via the Plantarflex Plate (refer to **Figure 6.0** below). Dynamic plantarflexion***** refers to the ability of the foot-platform to gradually angle downward as the legrest is extended. (See **Figure 7.0)**.

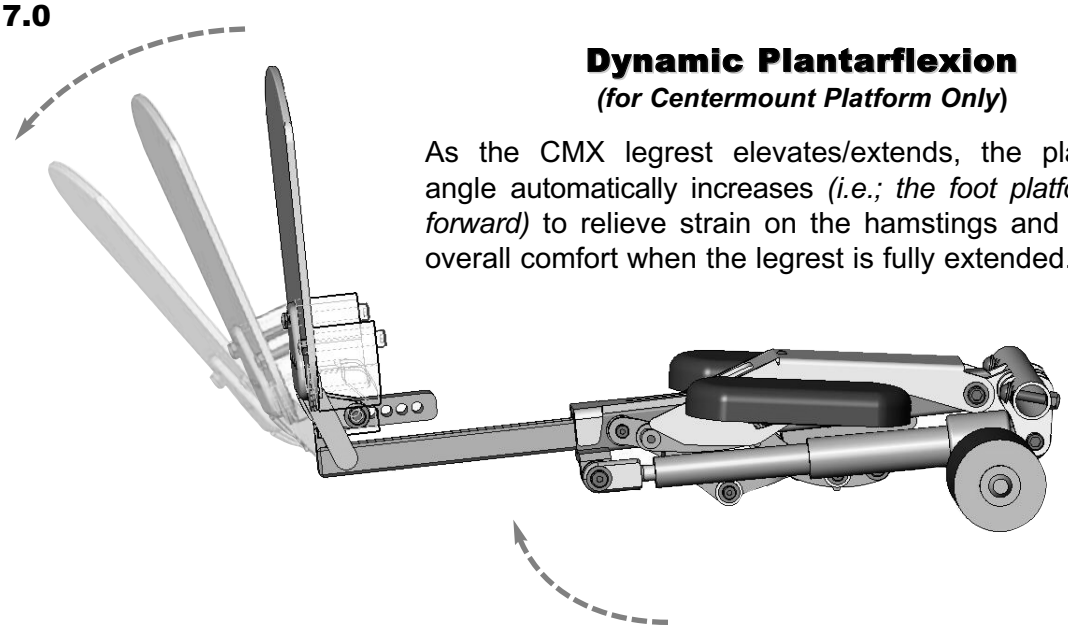
Important!
***Dynamic** Plantarflex is **not** available with the Split Footplate option on the CMX Legrest

Figure 6.0 **Initial Footplate Angle Set-up (Centermount Platform)**


Plantarflex Plate
The Plantarflex Plate is raised or lowered (via 3 screws) to make contact with the footplate interface bracket and set the initial footplate angle. (note: must be set-up with the legrest in the down (fully retracted) position
footplate interface bracket
Initial Foot Platform Angle
raising the plantarflex plate will lower the initial footplate angle
lowering the plantarflex plate will raise the initial footplate angle

3.0 - CMX Legrest Set-Up and Adjustment

Figure 7.0



Dynamic Plantarflexion

(for Centermount Platform Only)

As the CMX legrest elevates/extends, the plantarflex angle automatically increases *(i.e.; the foot platform falls forward)* to relieve strain on the hamstings and improve overall comfort when the legrest is fully extended.

F) SPLIT FOOTPLATES- Angle Adjustment:

The CMX Legrest with Split Footplates (Bi-Level or Uni-Level) can be *independently* adjusted to set the desired footplate angle for each footplate. Once set, these angles will remain consistent throughout the extension and retraction of the legrest assembly. (The Split Footplate design does not allow for plantarflex angle adjustment).

The footplate angles are adjusted via a screw at the rear of each footplate interface bracket. (Refer to **Figure 8.0** below).

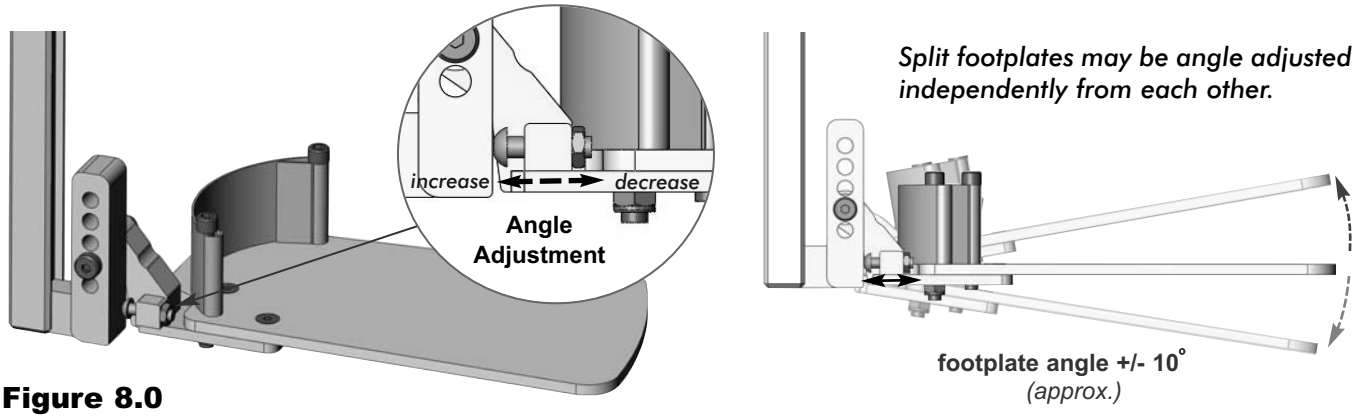


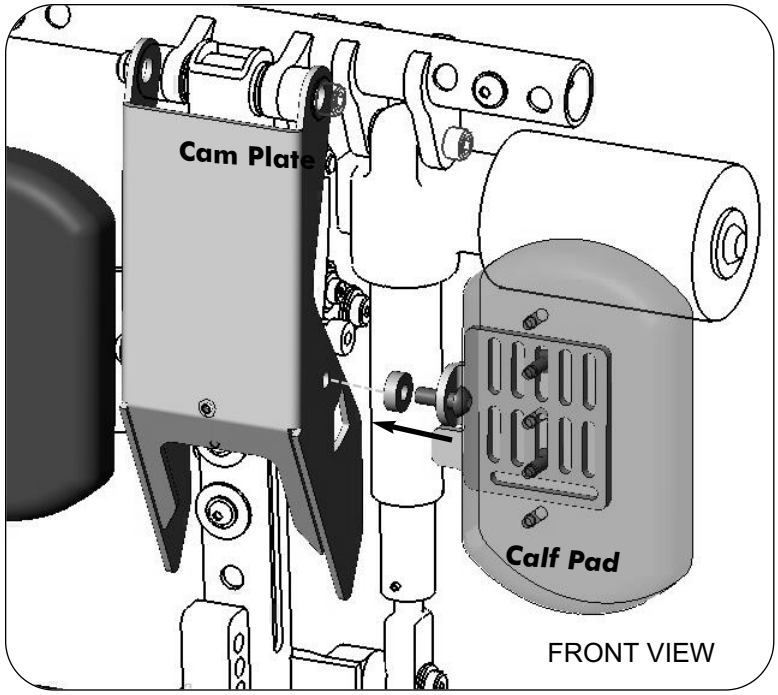
Figure 8.0

3.0 - CMX Legrest Set-Up and Adjustment

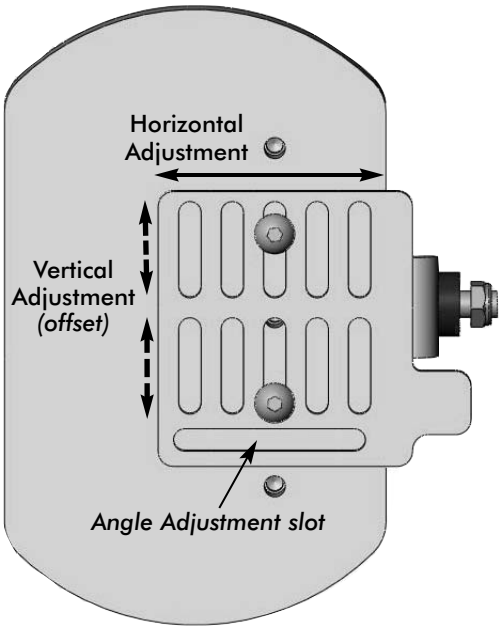
G) <u>Calf Pad Installation/ Adjustment:</u> The calf pads are installed by securing the pad mounting brackets onto the Cam Plate of the CMX legrest assembly. The calf pads may be independently adjusted *(as required)* to ensure a proper level of comfort for the end user, specifically in the extended legrest position.

The calf pad is adjustable laterally and/or vertically by aligning the slots in the mounting bracket with the threaded holes in the calf pad. The calf pads may also be angle adjusted by installing one of the pad mounting screws into the horizontal slot at the bottom of the mounting bracket. Please refer to **Figure 9.0**, as well as the sample calf pad configuration diagrams below.

Figure 9.0

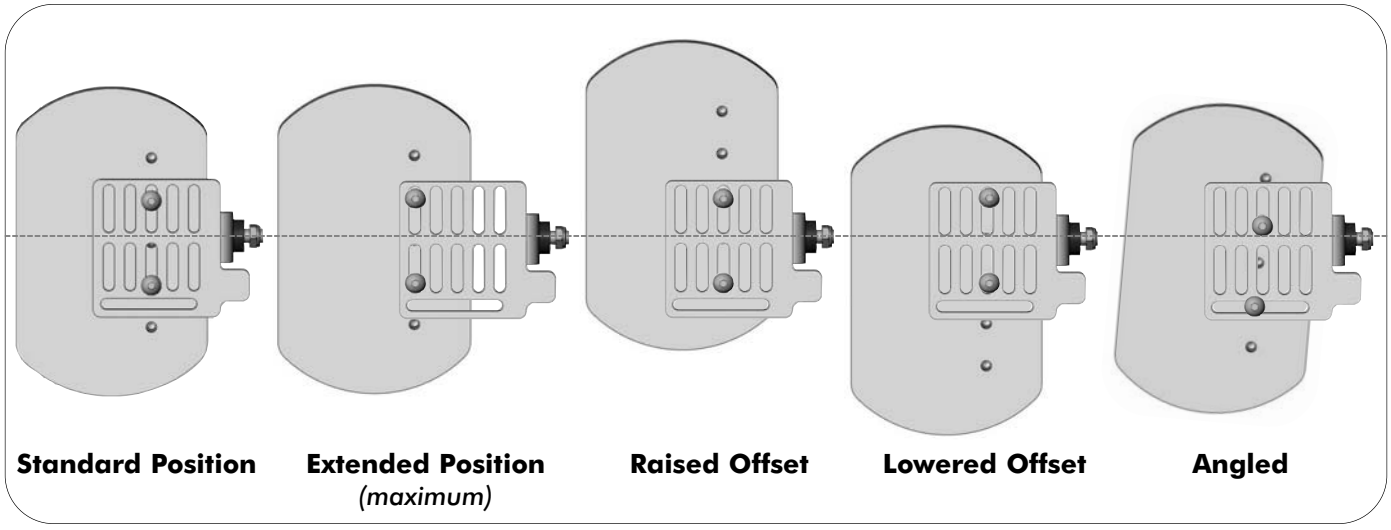


FRONT VIEW



REAR VIEW *(left calf pad)*

Calf Pad Adjustment ***(Sample Configurations)***



NOTES:

USA
700 Ensminger Rd. Suite 112
Tonawanda, NY, USA 14150
716-447-0050
888-433-6818

Canada
84 Citation Dr. Units 1-3
Concord, Ontario,
Canada L4K 1C9
905-695-0134

www.motionconcepts.com